

Application Serial No. 10/051,065

AMENDMENTS TO THE CLAIMS

1. - 9. (Cancelled)

5 10. (Previously Presented) In a directory server containing heterogeneous directory entries and a directory views hierarchy, each view containing a filter describing said view, a method of searching said view in said directory views hierarchy with a given filter, comprising the steps of:

10 (a) collecting filters from said view and all ancestor views of said view to form a first sub-filter;

rewriting said given filter using said first sub-filter to be a sub-tree search of the parent of the topmost view in said view hierarchy; and

performing said sub-tree search with said rewritten filter;

15 wherein each of said directory views belongs to a specific object class that contains a filter attribute, said filter attribute containing a filter that describes said directory views.

20 11. (Currently Amended) The method of Claim 10, wherein said directory entries can be stored at any underlying physical location. ~~do not need to be physically in any particular place.~~

12. (Original) The method of Claim 10, wherein said directory server has a flat directory information tree.

25 13. (Currently Amended) The method of Claim 10, wherein the existence of said views is transparent to a client of said directory server and said client requires no special knowledge of an internal implementation format of said views to use them.

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14. (Currently Amended) The method of Claim 10, wherein each of said directory views begins with an ordinary a directory entry.

5 15. (Cancelled)

16. (Original) The method of Claim 10, wherein said filter attribute is omitted from said directory views to facilitate a hierarchical directory structure.

10 17. (Original) The method of Claim 10, wherein each of said directory views comprises sub-views which provide a subset of said views.

18. (Original) The method of Claim 17, wherein said sub-views comprise different subject domains from said directory views.

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19. (Previously Presented) The method of Claim 10, said rewriting step comprising:

(b) if the search is not a sub-tree search, collecting all filters from all descendent views to form a second sub-filter;

20 (c) adding a third sub-filter to ensure all children of said view are included in the search for one level search or ensure all descendents of said view are included for a sub-tree search; and

(d) combining said first sub-filter, said second sub-filter, and said third sub-filter and said given filter to produce said rewritten filter.

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20. (Previously Presented) The method of Claim 19, wherein step (a) further comprises the steps of:

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- (1) starting from the topmost view and working down;
- (2) adding each filter to said first sub-filter in step (a) using the logical AND operator; and
- (3) moving down said hierarchy and going to step (2) until at said view.

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21. (Previously Presented) The method of Claim 19, wherein step (b) further comprises the steps of:

- (1) working down said hierarchy until said hierarchy ends;
- (2) adding each filter to said second sub-filter in step (b) using the logical AND operator and the logical NOT operator;
- (3) repeating step (2) until all sub-views of said view have been accounted for.

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22. (Previously Presented) The method of Claim 19, wherein step (c) further comprises the steps of:

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- (1) for sub-tree searches, using the logical OR operator and a filter which includes the components of said descendent views' distinctive attributes, and which excludes the distinctive attribute of said view;
- (2) for one level searches, using the logical OR operator and a filter which includes the components of said children views' distinctive attributes, and which excludes the relative distinctive attribute of all children views of said view using the logical NOT operator; and
- (3) for base searches, using the filter "objectclass=nsview", wherein "nsview" is the object class of said views.

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23. (Previously Presented) The method of Claim 19, wherein step (d) further comprises the steps of:

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(1) combining said third sub-filter from step (c) with the given search filter using the logical AND operator;

(2) combining said first sub-filter from step (a) and said second sub-filter from step (b) with the given search filter using the logical AND operator; and

5 (3) combining the resulting filters from step (1) and (2) using the logical operator OR.

24. (Original) The method of Claim 19, wherein said sub-filters from steps (a), (b) and (c) may be cached so that the filter rewriting only needs to perform step
10 (d), which amounts to simple filter concatenation.

25. - 26. (Cancelled)

27. - 28. (Cancelled)

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29. - 34. (Cancelled)

35. (Currently Amended) In a directory server containing heterogeneous directory entries, a method of hierarchically navigating said entries comprising
20 the steps of:

creating one or more directory views;

organizing said directory views into a hierarchy, wherein said step of organizing uses only information concerning said entries, wherein each of said directory views belongs to a specific object class that contains a filter attribute,
25 said filter attribute containing a filter that describes said directory view;

collecting filters from said directory views and all ancestor views of said directory views to form a first sub-filter; and

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using one of said directory views ~~that is most appropriate~~ for navigating to said entries.

36. (Original) The method of Claim 35, said organizing step further
5 comprising the steps of:

using said first sub-filter to be a sub-tree search of the parent of the topmost view in said view hierarchy

if the search is not a sub-tree search, collecting all filters from all descendent views to form a second sub-filter;

10 adding a third sub-filter to ensure all children of said view are included in the search for one level search or ensure all descendents of said view are included for a sub-tree search; and

combining said first sub-filter, said second sub-filter, and said third sub-filter to produce a rewritten filter.

15 37. (Currently Amended) In a directory server containing heterogeneous directory entries, a method of hierarchically navigating said entries comprising the steps of:

creating one or more directory views;

20 organizing said directory views into a hierarchy, wherein said step of organizing uses only information concerning said entries, wherein each of said directory views belongs to a specific object class that contains a filter attribute, said filter attribute containing a filter that describes said directory view;

rewriting said filter attribute using a first sub-filter; and

25 using one of said directory views ~~that is most appropriate~~ for navigating to said entries.

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38. (Previously Amended) The method of Claim 35, further comprising means to search said directory views by rewriting filters.